

**What is claimed is:**

1. A stator bobbin for axial winding, the stator bobbin being made from insulating material and comprising:

a first disc including an inner side and an outer side;

a second disc including an inner side and an outer side;

a connecting tube connecting the first disc with the second disc to form a space for winding between the inner side of the first disc and the inner side of the second disc, the connecting tube including a central hole;

a first pole plate attached to the outer side of the first disc; and

a second pole plate attached to the outer side of the second disc;

wherein a distance between an outer end of the inner side of the first disc and an outer end of the inner side of the second disc is greater than that between an inner end of the inner side of the first disc and an inner end of the inner side of the second disc.

2. The stator bobbin as claimed in claim 1, wherein at least one of the inner end of the inner side of the first disc and the inner end of the inner side of the second disc is an inclined section that connects with the connecting tube.

3. The stator bobbin as claimed in claim 1, wherein at least one of the inner side of the first disc and the inner side of the second disc is an inclined surface such that the space for winding tapers radially inward.

4. The stator bobbin as claimed in claim 1, wherein at least one of the inner end of the inner side of the first disc and the inner end of the inner side of the second disc is a convex section that connects with the connecting tube.

5. The stator bobbin as claimed in claim 1, wherein at least one of the inner side of the first disc and the inner side of the second disc includes at least two stepped sections and a connecting section between each two adjacent said stepped sections, said at least two stepped sections extending in a direction perpendicular to a longitudinal axis of the central hole of the connecting tube and locating at different levels, the connecting section being one of an

- 1 inclined surface and arcuate surface, said at least two stepped sections and the connecting
- 2 section being so arranged that the space for winding tapers radially inward.